Use of radioactive isotopes for studying the process of mixing of peat in machines.

was added in a quantity such as to obtain a radioactivity of 10 to 20μ Curie; the peat was thoroughly mixed with the solution and was then made into a ball of 3 to 4 cm dia. The obtained results are plotted in graphs and discussed. Comparison of results of dispersion analysis with the data obtained for the intermixing leads to the conclusion that slot presses intermix satisfactorily the peat but do not disperse it satisfactorily, whilst milling with an end-mill brings about intensive dispersion but little intermixing. A number of recommendations are made for improving the design of machinery for peat production.
There are 3 figures and 4 references, all of which are Slavic.

SUBMITTED: July 19, 1957.

ASSOCIATION: Physics Chair, Moscow Peat Institute. (Kafedra Fiziki Moskovskogo Torfyanogo Instituta).

AVAILABLE: Library of Congress.

VOLAROVICH, M.P., prof.; KUZHMAN, G.I., dotsent; MAKOV, I.F., inzh.; CHURAYEV, N.V., ~~kand. tekhn.~~ nauk

Studying processes of peat mixing by the peat processing machinery using radioactive isotopes. Nauch. dokl. vys. shkoly; gor. dela no.1:275-285 '58. (MIRA 11:6)

1.Predstavlena kafedroy fiziki Moskovskogo torfyanogo instituta.
(Peat machinery) (Radioisotopes)

ALEKSEYEV, Ye.T.; APENCHENKO, S.S.; BASOV, A.P.; BAUSIN, A.F.; BERSHADSKIY, L.S.; VELLER, M.A.; GINZBURG, L.N.; GUSEV, S.A.; DANILOV, G.V.; DOLGIKH, M.S.; DRUZHININ, N.N.; YEFIMOV, V.S.; ZAVADSKIY, N.V.; IVASHECHKIN, N.V.; KARAKIN, F.F.; KUZHMAN, G.I.; LOBANOV, S.P.; MERKULOV, Ya.V.; NIKODIMOV, P.I.; PANKRATOV, N.S.; PYATAKOV, L.V.; RODICHEV, A.F.; SMIRNOV, M.S.; STRUKOV, B.I.; SAVOCHKIN, S.M.; SAMSONOV, N.N.; SINITSYN, N.A.; SOKOLOV, A.A.; SOLOPOV, S.G.; CHERLYSHEV, S.G.; SHCHEPKIN, A.Ye.

Fedor Nikolaevich Krylov; obituary. Torf. prom. 35 no.6:32 '58. (MIRA 11:10)

(Krylov, Fedor Nikolaevich, 1903-1958)

BELOKOPYTOV, I.Ye.; BERESNOVICH, V.V.; BERSHADSKIY, L.S.; VEYTS, L.F.; ZHUKOV, A.G.; IVASHECHKIN, N.V.; KUZHMAN, G.I.; LASHNEV, I.A.; MURASHOV, F.G.; NIKODIMOV, P.I.; PYATAKOV, L.V.; SAMSONOV, N.N.; SEMENSKIY, Ye.P.; SINITSYN, N.A.; SOLOPOV, S.G.; STRUKOV, B.I.; STEBIKHOV, M.I.; TSUPROV, S.A.; CHERNOV, A.A.; CHULYUKOV, M.A.

Ivan Aleksandrovich Monakin. Torf. prom. 37 no. 3:37 '60. (MIRA 14:1)

(Monakin, Ivan Aleksandrovich, 1908-1960)

KUZHMA[illegible] L. I., and VORONKOV, G.Y.

"Kinetics of the Process of Drying of Fine Peat."

Report submitted for the Conference on Heat and Mass Transfer, Minsk, BSSR, June 1961.

ABKHAZI, V.I.; ANTONOV, V.Ya.; BELOKOPYTOV, I.Ye.; VARENTSOV, V.S.; GORYACHKIN, V.G.; ZYUZIN, V.A.; KRYUKOV, M.N.; KUZHMAN, G.I.; OZEROV, B.N.; RIVKINA, Kh.I.; SEMENSKIY, Ye.P.; SOKOLOV, A.A.; SOLOPOV, S.G.; STRELKOV, S.S.; TYUREMNOV, S.N.; CHULYUKOV, M.A.

Sergei Alekseevich Sidiakin. Torf.prom. 38 no.2:40 '61. (MIRA 14:3)
(Sidiakin, Sergei Alekseevich, 1897-1960)

KUZHMAN, G.I.; NOVICHKOV, S.N.

Drying and moistening of small-sized peat. Inzh.-fiz.zhur. 5 no.3:33-38 Mr '62. (MIRA 15:3)

1. Torfyanoy institut, Kalinin.
(Drying)(Peat)

ABKHAZI, V.I.; ANTONOV, V.Ya.; BLYUMENBERG, V.V.; VARENTSOV, V.S.; VELLER, M.A.; ZYUZIN, V.A.; IVANOV, V.N.; KUZHMAN, G.I.; LUKIN, A.V.; MATVEYEV, A.M.; OZEROV, B.N.; PAL'TSEV, A.G.; PEROV, N.P.; PROKHOROV, N.I.; RAKOVSKIY, V.Ye.; SEMENSKIY, Ye.P.; SOLOPOV, S.G.; TYUREMNOV, S.N.; TSUPROV, S.A.; CHULYUKOV, M.A.

Viktor Georgievich Goriachkin; obituary. Torf.prom. 39 no.4:40 '62. (MIRA 15:7)

(Goriachkin, Viktor Georgievich, 1893-1962)

VOLAROVICH, M.P.; YASHCHENKO, A.I.; KUZHMAN, G.I.

Effect of ultrasonic waves on the rheological properties of humic substances. Koll. zhur. 25 no.4:398-401 Jl-Ag '63.
(MIRA 17:2)

1. Kalininskiy torfyanoy institut.

VOIAROVICH, M.P.; KOVALEVSKIY, Ye.P.; KUZHMAN, G.I.

Studying the elastic properties of peat by the pulse ultrasonic method. Trudy Kal. torf. inst. no.13:51-58 '63.

(MIRA 17:12)

ZELIAN, M.A.; FUKHMAN, G.I.; PENKOV, V.M.

Using artificial ventilation to dry fine peat in caravans. Trudy Kal. torf. inst. no.13:148-153 '63. (MIRA 17:12)

VOLAROVICH, M.P.; KUZHMAN, G.I.; YASHCHENKO, A.I.

Anomalous velocity of propagation of ultrasonic waves in peat of 80-90% moisture content. Koll. zhur. 26 no.3:392-393 My-Je '64 (MIRA 17:9)

1. Kalinskiy torfyanoy institut.

KUZHMAN M.I.

"Contact of Pyruvic Acid in the Blood of Employees Working in an Atmosphere Containing Sulfur Dioxide," by M. I. Kuzhman and I. V. Sidorenkov, Tr. Chkalovskovo Med. In-ta (Works of the Chkalov Medical Institute), 1955, No 4, pp 59-64 (from Referativnyy Zhurnal -- Khimiya, Biologicheskaya Khimiya, No 23, 10 Dec 56, Abstract No 22,501)

"Eighty-two employees of a copper-sulfur plant were examined for the content of pyruvic acid in their blood, in order to determine the state of vitamin B_1 hypovitaminosis. It was established that the pyruvic acid content in the blood of workers who spent a prolonged period of time in an atmosphere containing SO_2 averaged 1.226 mg/% as contrasted with 0.9 mg/% in the blood of workers of the control group."

Sum. 1305

KUZHMAN, M. I. Cand Med Sci -- (diss) "Effect of novocain upon oxidation-reduction processes in nervous tissue." [Sverdlovsk], 1957. 12 pp (Sverdlovsk State Med Inst), 250 copies (KL, 3-58, 99)

KUZHMAN, M.I.

Mechanism of the action of cocaine on the respiration of nerve tissue. Vop. med.khim. 6 no.2:188-191 Mr-Ap '60. (MIRA 14:5)

1. Chair of Biochemistry, The Medical Institute, Orenburg.
(BRAIN) (COCAINE)

KUZHMAN, M. I., and SIDORENKOV, I. V. (USSR)

"Mechanism of Action of Certain Anaesthetics."

Report presented at the 5th International Biochemistry Congress, Moscow, 10-16 Aug 1961

KUZHMAN, M.I.

Effect of local anesthetics on respiratory phosphorylation.
Vop. med. khim. 7 no.3:243-245 My-Je '61. (MIRA 15:3)

1. Chair of Biochemistry of the Orenburg Medical Institute.
(RESPIRATION) (PHOSPHORYLATION)
(LOCAL ANESTHESIA--PHYSIOLOGICAL EFFECT)

KUZHMAN, M.I.

Effect of local anesthetics -- mesocaine and xylocaine -- on oxidative processes in the rat brain tissue. Farm. i toks. 25 no.1:98-103 Ja-F '62. (MIRA 15:4)

1. Kafedra biokhimii Orenburgskogo meditsinskogo instituta.
(BRAIN) (ACETOXYLIDIDE) (MESOCAINE)
(OXYGEN IN THE BODY)

KUZHMAN, M.I.

Effect of dicaineon respiration and glycolysis in the brain tissue of rats. Trudy Oren. otd. Vses. fiziol. ob-va no.2: 76-80'60. (MIRA 16:8)

1. Kafedra biokhimii (zav. - prof. I.V.Sidorenkov) Orenburgskogo meditsinskogo instituta.
(TETRACAINE) (BRAIN)
(OXIDATION, PHYSIOLOGICAL)

KUZHMAN, M.I.

Effect of sovcaine on tissue respiration and glycolysis in the brain tissue of rats. Trudy Oren. otd. Vses. fiziol. ob-va no.2:81-86'60. (MIRA 16:8)

1. Kafedra biokhimii (zav. - prof. I.V.Sidorenkov) Orenburgskogo meditsinskogo instituta.
(DIBUCAINE) (BRAIN) (OXIDATION, PHYSIOLOGICAL)

KUZHMAN, M.I.

Effect of local anesthetics on the oxidation of glutamic acid in the brain tissue of rats. Trudy Oren. otd. Vses. fiziol. ob-va no.2:87-90 '60. (MIRA 16:8)

1. Kafedra biokhimii (zav. - prof. I.V.Sidorenko) Orenburgskogo meditsinskogo instituta.
(GLUTAMIC ACID) (LOCAL ANESTHESIA)
(OXIDATION, PHYSIOLOGICAL) (BRAIN)

KUZHMAN, M.I.; SIDORENKOV, I.V.; TENYAKOV, P.T.

Effect of novocaine on oxidative deamination by the kidney tissue of rabbits of different ages. Trudy Oren. otd.Vses. fiziol. ob-va no.2:91-94 '60. (MIRA 16:8)

1. Kafedra biokhimii (zav. - prof. I.V.Sidorenkov) Orenburgskogo meditsinskogo instituta.
(NOVOCAINE) (AMINO ACID METABOLISM)
(AGING)

KUZHMAN, Z.P., inzhener.

Classification of peat cutting fields according to tendency to spontaneous combustion. Torf.prom. 30 no.9:5-7 S '53. (MLRA 6:8)

1. Torfyanaya opytnaya stantsiya VNIITP. (Peat bogs)

KUZHYAKIN, A. P., BEZDENEZHNYKH, I. S., AGAFONOV, V. I., KOZHDESTVENSKIY, V. M.

"Comparative analysis of the basic rules of the epizootic and epidemic processess."

report submitted at the 13th All-Union Congress of Hygienists, Epidemiologists and Infectionists, 1959.

USMANKHODZHAYEV, Kh.Kh.; KOZIBAYEV, G.S.

Motion equation for the driving link of a crank mechanism taking into consideration the friction in kinematic pairs. Izv. AN Uz. SSR. Ser. tekh. nauk 9 no.3:38-46 '65. (MIRA 18:8)

1. Institut mekhaniki i Vychislitel'nyy tsentr AN UzSSR.

L 58541-65

ACCESSION NR: AP5012875 UR/0280/65/000/002/0047/0057

AUTHOR: Gutchin, I. B. (Moscow); Kuzichev, A. S. (Moscow) 10 B

TITLE: Optimal synthesis of formal neurons

SOURCE: AN SSSR. Izvestiya. Tekhnicheskaya kibernetika, no. 2, 1965, 47-57

TOPIC TAGS: neuron, formal neuron, neuron synthesis

ABSTRACT: A definition of the formal neuron after Warren McCulloch (Proc. Symp. on Mech. of Thought Processes, N. [illegible]

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L 58541-65

ACCESSION NR: AP5012875

conditions: $a_i + \sum_{j=1}^{n} b_{i,j}(x_j' - x_j'') + p_i - q_i = 0, \quad i = 1, \ldots, N$; (2) The automatic optimization on a simulator; (3) Improvement of the neuron by successive [illegible] and connecting-fiber tables (for 3-input neurons). The results of synthesis by any of the above methods are expressed by integers, and the number of fibers, for a given variant of the solution, is constant. Orig. art. has: 13 figures, 37 formulas, and 5 tables.

ASSOCIATION: none

SUBMITTED: 26Aug64 ENCL: 00 SUB CODE: DP

NO REF SOV: 002 OTHER: 003

Card 2/2

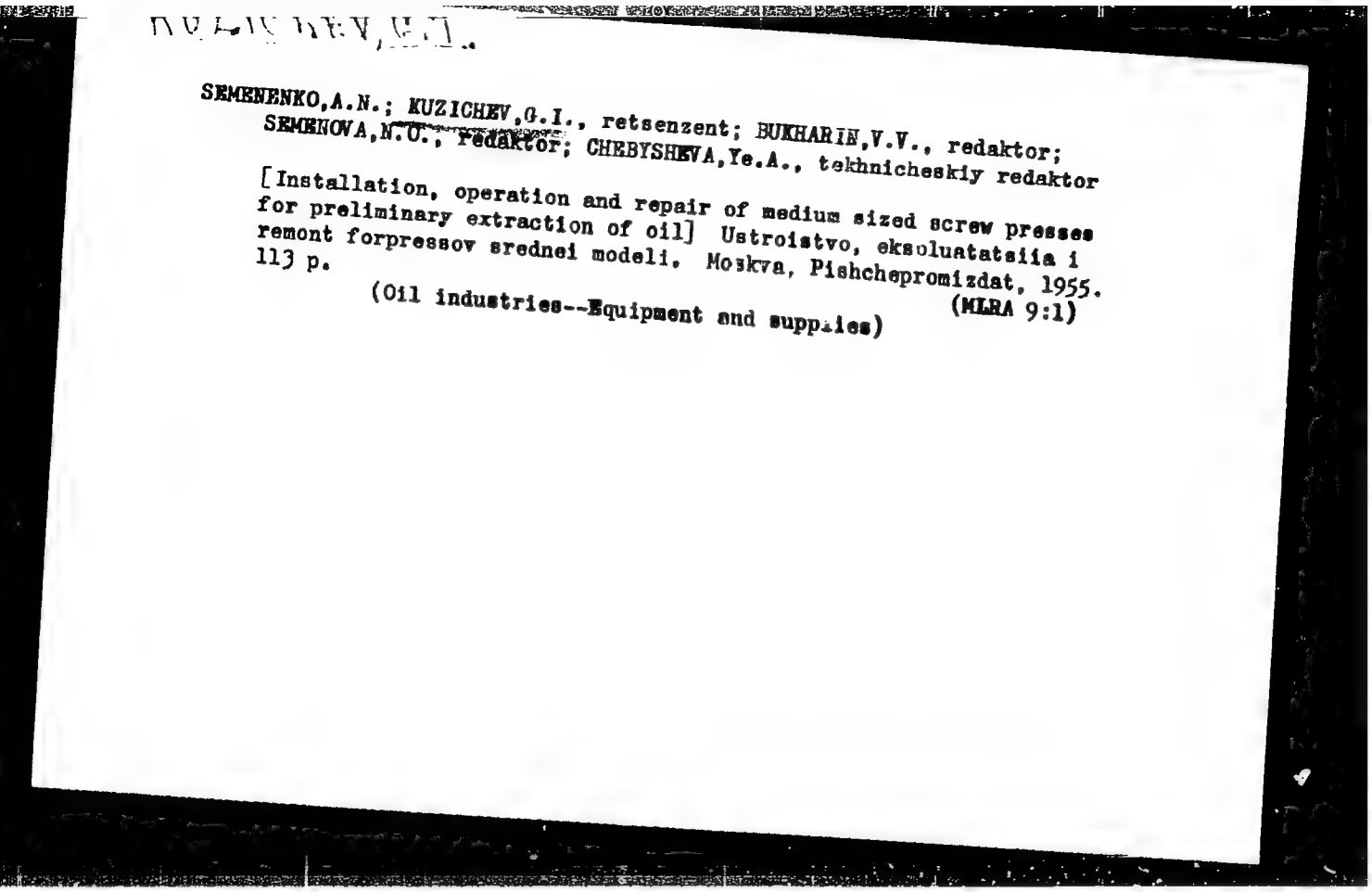
1. KUZICHEV, G. I.: KUZNETSOV, A. T.

2. USSR (600)

4. Power Presses

7. Starting and operation of MP-21 screw presses in the oil extraction plant in Yangi-Yul'. Masl. zhir. prom. 17 no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, February 1953. Unclassified.



SEMENENKO,A.N.; KUZICHEV,G.I., retsenzent; BUKHARIN,V.V., redaktor;
SEMENOVA,N.O., redaktor; CHEBYSHEVA,Ye.A., tekhnicheskiy redaktor

[Installation, operation and repair of medium sized screw presses for preliminary extraction of oil] Ustroistvo, eksploatatsiia i remont forpressov srednei modeli. Moskva, Pishchepromizdat, 1955. 113 p.

(Oil industries--Equipment and supplies) (MLRA 9:1)

PETUKHOV, N.G.; KUZICHEV, V.F.

Using complete filling of drawn stopes in working steep seams of various thicknesses: Practices of the "Khatsepetovskaia-Zapadnaia" Mine with filling of drawn stopes. Ugol' 38 no.12:9-11 '63. (MIRA 17:5)

1. Nachal'nik shakhtoupravleniya "Khatsepetovskoye-Zapadnoye" tresta Ordzhonikidzeugol' (for Petukhov). 2. Khar'kovskiy inzhenerno-ekonomicheskiy institut (for Kuzichev).

SHAPOCHKIN, B.A., kand.tekhn.nauk; KUZICHEV, V.I., inzh.

Calculation of masks for making aspheric surfaces by application of an additional layer under vacuum. [Trudy] MVTU no.102:50-60 '61. (MIRA 14:8)
(Optical instruments)

S/549/62/000/110/004/004
E010/E401

AUTHOR: Kuzichev, V.I., Engineer

TITLE: Distortion of a surface profile by vacuum asphorization

SOURCE: Moscow. Vysshaye tekhnicheskoye uchilishche. (Trudy) no.110. 1962. Opticheskiye i optiko-elektronnyye pribory. 118-128

TEXT: Aspherical surfaces, used in optical systems, are produced by depositing layers of sublimated substance on a spherical surface in vacuum. The thickness of layers can be controlled with an accuracy of up to a few hundredths of a micron. The present article deals with distortions of the profile of reflecting aspherical surfaces produced by the vacuum sublimation method. The author lists the factors affecting the distribution of sublimated substances over the surface being coated and cites the findings by H. Koch (Jenaer Jahrbuch I Teil, 1958, 275) and by I.A.Dobrowolski and W.Wenstein (Nature N 9, 1955). The thickness of the sublimated layers is measured by photometers. The necessary thickness of a layer is secured by applying a shielding pattern which represents a flat disk with a definite shape of the

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cut, being rotated in the process of evaporation. This shape is prescribed by an equation in polar coordinates $\varphi = f(\rho)$, which connects the cut angle φ with the radial coordinate ρ. The angle φ is approximately linearly related to the thickness t of the deposited layer, the relation between an error in angle $\Delta\varphi$ and the corresponding error in the thickness Δt of the layer is given by the expression

$$\Delta\varphi = \frac{\varphi_{max}}{t_{max}} \Delta t \qquad (4)$$

There is derived another expression relating the error in thickness with the error in coordinate ρ, $\Delta\rho$:

$$\Delta\rho \leqslant \frac{c}{f'(y)} \Delta t \qquad (10)$$

where c is a constant coefficient and $f'(y)$ is the derivative of the function $t = f(y)$ prescribed (Fig.3). Then the problem of calculating admissible errors $\Delta\rho$ for the case of second-order

curves is solved. In order to transform a concave spherical surface of 2h in diameter into a surface of second order, an additional layer of substance must be sublimated on the surface of the sphere. The profile of this layer is determined by the relation

$$t = \frac{e^2}{8r^3} y^2(h^2 - y^2) \qquad (11)$$

where y is coordinate of the zone considered on the surface of the part (Fig.3), r is the radius of curvature of the second-order curve at its top and e^2 is its eccentricity. Using the method of finding extrema, the author derives the following expression for the admissible error in ρ

$$\Delta\rho \leqslant \frac{4}{e^2}\left(\frac{r}{h}\right)^3 c_y \Delta t \qquad (14)$$

The same formula holds also for convex aspherical surfaces for which the thickness of the layer is expressed as follows

Distortion of a surface ...

$$t = \frac{e2}{32r^2}(h^2 - 2y^2)2$$

Next is the problem of demands on the accuracy of manufacturing a sphere which approximates in the best way the aspherical surface wanted, i.e. whose deviations from the aspherical surface are the least. To solve this problem, the author derives a formula of undulatory aberration of a spherical mirror for a point lying on its axis. On differentiating this formula and replacing the differentials by the finite increments, he arrives at a final expression for the admissible error Δr in the radius of the approximating sphere as a function of Δl, the change in undulatory aberration of the spherical mirror:

$$\Delta r \leqslant \frac{\Delta l}{\frac{3}{4}\left(\frac{h}{r}\right)^4 + \frac{5}{8}\left(\frac{h}{r}\right)^6 + \frac{35}{64}\left(\frac{h}{r}\right)^8 + \ldots} \qquad (19)$$

For the value $\Delta l = \lambda/4 = 0.14\ \mu$ the author gives the following

Distortion of a surface ...

S/549/62/000/110/004/004
E010/E401

values of Δr calculated by Eq.(19) for different relative apertures:

Relative aperture	1:0.5	1:0.75	1:1	1:1.5	1:2	1:4
Δr, mm	0.0025	0.014	0.045	0.24	0.76	12.2

There are 5 figures.

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Distortion of a surface ...

S/549/62/000/110/004/004
E010/E401

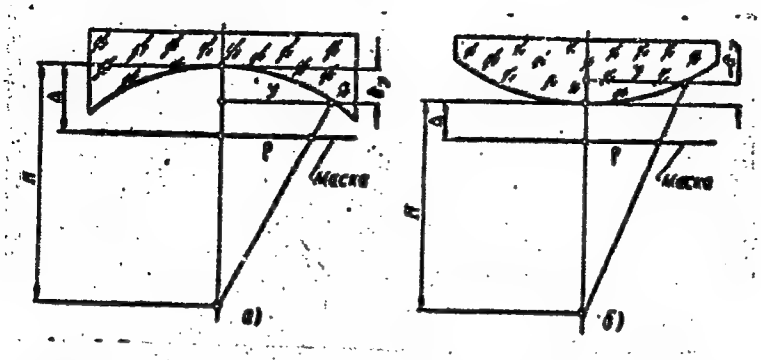

Fig.3. Mutual layout of the part, shielding pattern and evaporation source. а - concave part; б - convex part.

H - distance from the evaporation source to the top of the part;
Δ - gap between the shielding pattern and the top of the part;
δ_y - the magnitude of deflection in the part for the given coordinate y.

Card 6/6

GAL'PERIN, E.A., KUZICHEVA, L.R., AKILOV, A.A.

Intranasal vaccination against influenze A2. Vop.virus. 3 no.5: 305-306 S-) '58 (MIRA 11:10)

1. Kafedra infektsionnykh bolezney TSentral'nogo instituta usovershenstvovaniya vrachey, Moskva.
(INFLUENZA, immunology,
A2, vaccine for intranasal admin (Rus))

L 16471-66 EWT(m)/ETC(f)/EPF(n)-2/EWG(m)/EWP(j) WW/DM/RM
ACC NR: AP6005532 (A) SOURCE CODE: UR/0089/66/020/001/0053/0054

43
40
8

AUTHOR: Fokin, A. V.; Kuzicheva, V. S.; Fomin, Yu. K.

ORG: none

TITLE: Possibilities of "oil" flotation for reprocessing liquid radioactive wastes

19,55

SOURCE: Atomnaya energiya, v. 20, no. 1, 1966, 53-54

TOPIC TAGS: flotation, radioactive waste disposal, radioisotope, nuclear engineering, solvent extraction

ABSTRACT: "Oil" flotation may be used at ordinary temperatures with comparatively simple equipment for extracting the solid phase from waste radioactive pulp and concentrating it together with trapped radioisotopes in a layer of organic matter which is immiscible with water. The suspended particles are treated with various water-repellent surface-active sorbents, (e. g. salts of fatty acids). Up to 90--95% of the radioactive isotopes may be removed from the water in a single stage. It is recommended that nonflammable and low-boiling solvents of the carbon tetrachloride type should be used in quantities of 30-50 ml per gram of solid residue to

UDC: 621.039.722 + 621.928.5

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ACC NR: AP6005532

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be extracted. In some cases organic monomers may be used for the "oil", and the layer of extracted material may be directly converted to a solid plastic by bulk or suspension polymerization. It was found that preparations based on polystyrene and various polyester acids may be used for burial of the radioactive isotopes.

SUB CODE: 18/ SUBM DATE: 15Oct65/ ORIG REF: 000/ OTH REF: 000

Card 2/2 mc

KHENOKH, M.A.; KUZICHEVA, Ye.A.; AVER'YANOV, S.V.; YEVDOKIMOV, V.F.

Action of ultrasonic waves and γ-rays of Co^{60} on polyvinyl alcohol solutions. Zhur. VKHO 5 no.1:105-106 '60. (MIRA 14:4)

1. Institut evolyutsionnoy fiziologii imeni Sechenova AN SSSR.
(Vinyl alcohol) (Ultrasonic waves)
(Gamma rays)

S/020/60/135/002/035/036
B016/B052

AUTHORS: Khenokh, M. A., Kuzicheva, Ye. A., and Yevdokimov, V. F.

TITLE: The Action of Gamma Rays of Co^{60} on Dry Carbohydrates

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 135, No. 2, pp. 471 - 474

TEXT: The authors report on their experiments concerning the action of high gamma doses (Co^{60}, activity of ~1440 g-equ. radium) on dry sugars and polysaccharides. Dry and air-dried glucose, fructose, saccharose, raffinose, mannite, and starch were exposed to radiation in a vacuum. The resulting products were examined by the analytical methods described in Ref.1. The action of γ-rays was revealed by the strong smell of the above carbohydrates, and by the fact that they turned increasingly brown as the dose was increased. The analysis of the products revealed that under the action of γ-rays of Co^{60}, dry carbohydrates undergo chemical transformations which are closely related to those of aqueous radiolysis

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(Ref.1): They also undergo oxidative destruction under the formation of H_2CO, dioxyacetone, and organic acids; the glucoside bonds of di-, tri-, and polysaccharides are ruptured. It was found that equal products are formed under the direct and indirect gamma action on saccharose and mannite. The ultraviolet absorption spectra of glucose, fructose, raffinose, and starch solutions exposed to radiation (Figs.1-3) differed from those of aqueous carbohydrate solutions exposed to radiolysis. This indicates that in the latter case the mechanism of chemical transformation differs from that of direct gamma action. The authors' data only partly prove the scheme according to which the reaction of the dissolved substances with the OH radicals yields the same products as formed by direct gamma action (Ref.5). The radiochemical transformation in dilute solutions depends on the reaction of dissolved substances and H atoms, OH and HO_2 radicals. Ionizing radiation, on the other hand, causes an ionization and excitation of molecules which decay under the formation of free radicals. The recombination of free radicals formed in dry sugars (Ref.6) is difficult due to slowed-down diffusion. Long-lived radicals remain in the crystal where they form monosaccharides

The Action of Gamma Rays of Co^{60} on Dry Carbohydrates

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and other compounds when reacting with water. In solid carbonhydrates exposed to radiation, these radicals form intermediary stages of the radiolytic decay of molecules. However, it is difficult to detect these radicals during aqueous radiolysis, since the addition of the elements of water takes place rapidly. It is hoped that this work will contribute to a better understanding of the chemical destruction of carbonhydrates by ionizing radiation. They thank Professor I. Ya. Poddubnyy who made the experiments possible. V. V. Antuf'yev assisted in this work. There are 3 figures and 6 references: 3 Soviet and 1 US.

ASSOCIATION: Institut tsitologii Akademii nauk SSSR (Institute of Cytology of the Academy of Sciences USSR)

PRESENTED: June 2, 1960, by A. F. Ioffe, Academician

SUBMITTED: May 30, 1960

Card 3/3

43237
S/844/62/000/000/057/129
D204/D307

AUTHORS: Votinov, M. P., Khenokh, M. A., Kuzicheva, Ye.A, Yevdokimov, V. F. and Antuf'yev, V. V.

TITLE: The EPR spectra of γ irradiated solid carbohydrates

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 335-338

TEXT: The EPR spectra of some dry, crystalline, mono-, di-, and trisaccharides and other high-molecular weight carbohydrates were studied in an effort to determine the radiochemical changes taking place. The spectra of (1) glucose, (2) fructose, (3) saccharose, (4) galactose, (5) raffinose, (6) mannite, (7) cellulose, and (8) cellobiose are illustrated, described and discussed. Thus e.g. (1) two types of radicals were found, one of which corresponded to a fission of a C-H bond; (2) evidence was obtained of interaction between an unpaired election and 3 equivalent protons - the radical present was a secondary one; (3) the radicals formed by

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The EPR spectra ...

the fission of a 1,2-glucoside bond and by the splitting off of a H from a C; (4) the spectrum became symmetrical on storage in air at room temperature; (5) two types of radicals were present, formed by the fission of 1,2- and 6,1-glucoside bonds and by the splitting off of H's bonded directly to C-atoms; (6) an interaction was evident between an unpaired electron with 3 nonequivalent protons; (7) two types of radicals were detected, one of which was formed by a fission of a 1,4-bond; (8) two radicals were present, one being secondary. No EPR signal was detected from γ irradiated starch. The concentrations of radicals and the EPR spectra remained essentially unchanged over more than 6 months, at room temperature; the radicals disappeared when the carbohydrates were melted. The intensity of the EPR signals increased, slower than linearly, with increasing doses of irradiation. It is concluded that information concerning the radiochemical changes may be obtained by the EPR method. There are 2 figures.

ASSOCIATION: Leningradskiy politekhnicheskiy institut im. M. I. Kalinina (Leningrad Polytechnical Institute im. M.I.

The EPR spectra ...

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D204/D307

Kalinin); Institut tsitologii AN SSSR (Institute of Cytology, AS USSR); Institut Vysokomelekulyarnykh soyedineniy AN SSSR (Institute of High Molecular Weight Compounds, AS USSR)

Card 3/3

S/844/62/000/000/071/129
D204/D307

AUTHORS: Khenokh, M. A., Kuzicheva, Ye. A. and Yevdokimov, V. F.

TITLE: The action of ionizing radiation on solid carbohydrates

SOURCE: Trudy II Vsesoyuznogo soveshchaniya po radiatsionnoy khimii. Ed. by L. S. Polak. Moscow, Izd-vo AN SSSR, 1962, 409-414

TEXT: The influence of γ oxidation on solid glucose, galactose, fructose, sucrose, lactose, raffinose, mannite and starch was investigated. γ rays ionize and excite the carbohydrate molecules, which split into stable free radicals. The monosaccharides decompose to give HCHO and other compounds, but no new reducing sugars are formed. Sucrose forms fructose, HCHO and dihydroxyacetone but lactose gives the monosaccharide only, with high radiation doses. Hence the 4,1-bond is more stable to γ radiation than the 2,1-bond. In raffinose the γ rays break the 1,2-bond, liberate fructose and form HCHO and a compound containing a chromatic group. Mannite decomposes to give HCHO, dihydroxyacetone, an organic acid and fruc-

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tose, while starch forms a reducing compound, nCHO, and an organic acid but no glucose or maltose. Conductometric titrations of 1% solutions of the irradiated saccharides showed that the amount of NaOH required for neutralization decreased in the order starch > glucose > sucrose > mannite > raffinose. The acidity of any one solution is greater if the corresponding carbohydrate was irradiated in O_2 rather than in N_2. The radiochemical changes in solid carbohydrates were similar to those observed in the corresponding aqueous solutions. There are 5 figures.

ASSOCIATION: Institut tsitologii AN SSSR (Institute of Cytology AS USSR)

KUZICHEVA, Ye. A.; KHENOKH, M. A.

Effect of the gamma rays of Co^{60} on aqueous solutions of mannitol. Zhur. ob. khim. 32 no.12:4070-4073 D '62. (MIRA 16:1)

1. Institut tsitologii AN SSSR.

(Mannitol) (Gamma rays) (Cobalt—Isotopes)

ACCESSION NR: AP4034568 S/0079/64/034/004/1329/1334

AUTHOR: Kuzicheva, Ye. A.; Khenokh, M. A.

TITLE: Effect of ionizing radiation on solid glycogen

SOURCE: Zhurnal obshchey khimii, v. 34, no. 4, 1964, 1329-1334

TOPIC TAGS: glycogen, ionizing radiation, gamma irradiation, viscosity, molecular weight, IR spectra, oxidation, decomposition product, dihydroxyacetone, formaldehyde, carbonyl compound, carboxyl compound, glucose

ABSTRACT: The effect of ionizing radiation of cobalt-60 on solid glycogen was examined. On irradiation the characteristic viscosity (molecular weight) of the glycogen was reduced: with 106.8×10^6 rads, viscosity was reduced 56%; with 210.4×10^6 rads dosage viscosity did not decrease further. The optical density of the colored iodine complex of glycogen drops rapidly with increasing irradiation. Gamma-irradiation of glycogen in the solid state splits the macromolecule at the α-1,4 and α-1,6 bond. IR spectra indicated carbonyl compounds, H_2CO and carboxyl compounds are formed by radiation chemical transformation of glycogen, with the carbonyl content increasing more and the amount of formaldehyde being less than

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ACCESSION NR: AP4034568

proportional to irradiation dosage, indicating decomposition of H_2CO at higher energies of activation. The radiation chemical transformation is accelerated by oxidation leading to the formation of dihydroxyacetone in addition to the other aforementioned compounds. No glucose was found in the decomposition products of glycogen. Orig. art. has: 5 figures

ASSOCIATION: Institut tsitologii Akademii nauk SSSR (Institute of Cytology Academy of Sciences, SSSR)

SUBMITTED: 16Jan63 ENCL: 00

SUB CODE: OC, MP NO REF SOV: 009 OTHER: 007

Card 2/2

KUZICHEVA, Ye.A.; KHOKHOKH, M.A.

Effect of ionizing radiation on aqueous solutions of glycogen in the atmosphere of oxygen and in a vacuum. Zhur. ob. khim. 35 no.1: 7-14 Ja '65. (MIRA 18:2)

1. Institut tsitologii AN SSSR.

KUZICHKIN, I. G.

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Electrical Engineering Abst.
Vol. 57 No. 675
Mar. 1954
Telecommunication

621.398 : 621.311.4

1313. **Remote control of electric stations without the use of powerful accumulators.** N. E. TOGANSON AND I. G. KUZICHKIN. *Elekt. Stantsii*, 1953, *No.* 7, 33–5. *In Russian.*

A description with detailed sketches of a spring-aided drive for automatic control gear, which eliminates the need for accumulators in small and medium power automatic substations. P. QUELON

5/20/54p

IOGANSON, N.Ye., inzhener; KUZICHKIN, I.G.

Control current used in electric power plant without storage batteries. Elek.sta. 25 no.1:42-45 Ja '54. (MLRA 7:1)
(Electric power plants)

Kuzichkin, I. G.

AID P - 2069

Subject : USSR/Electricity

Card 1/1 Pub. 26 - 11/29

Authors : Yoganson, N. Ye., and Kuzichkin, I. G., Engs.

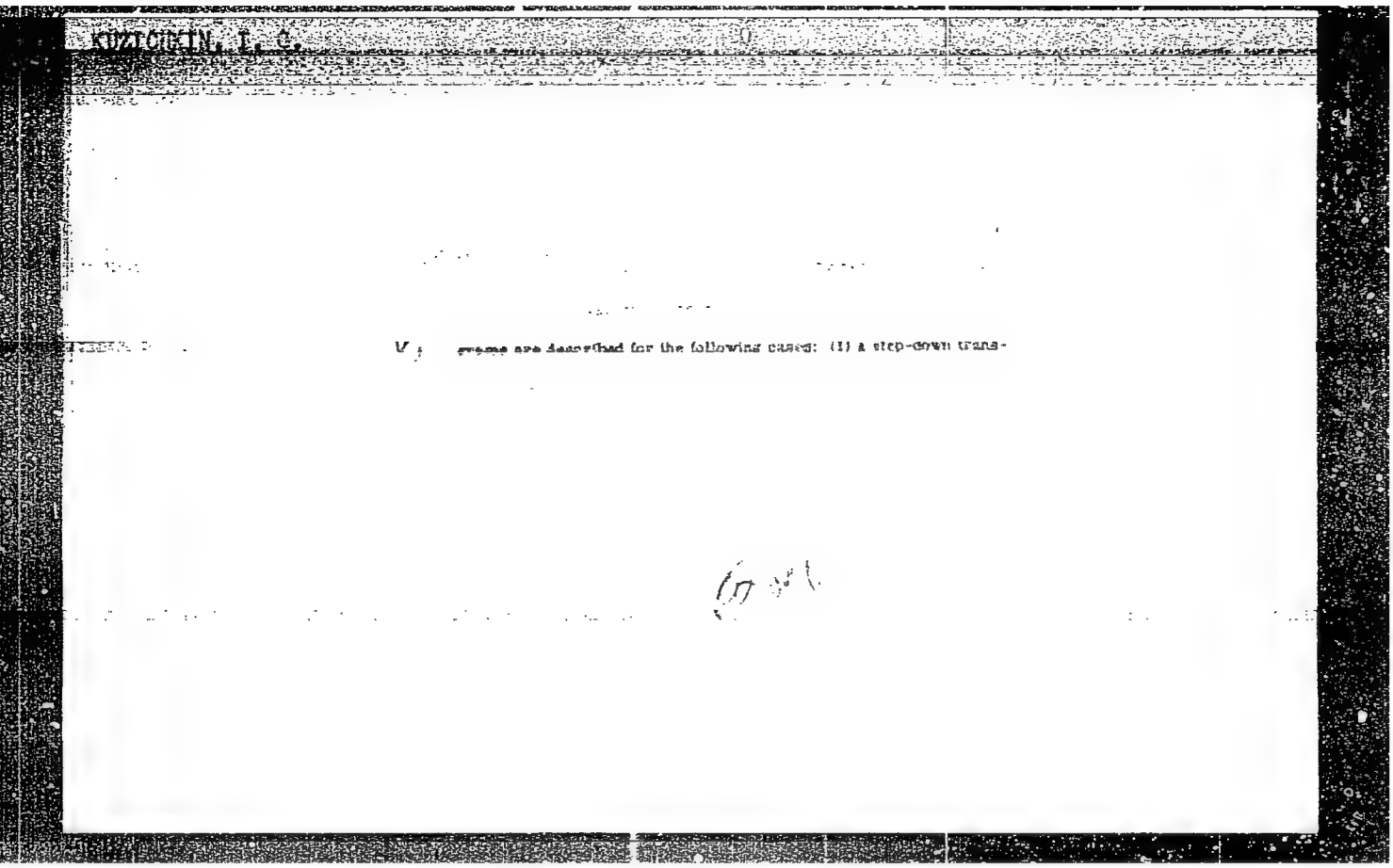
Title : Protection and control of a medium-size power generator by two-coil switch-operating mechanisms.

Periodical: Elek. sta., 4, 38-40, Ap 1955

Abstract : The authors describe in detail a two-coil device actuating the operating mechanism of circuit breakers. They maintain that this device simplifies considerably the differential and over current relay protection of the generator, with capacities up to 6,000 kw. The use of these devices is strongly recommended. Four diagrams.

Institution: None

Submitted : No date



KOZYCHKIN, I. G.

[illegible] systems are described for the following cases: (1) a step-down trans-

DOBROVOL'SKIY, D.S., kand. tekhn. nauk; KUZICHKIN, I.M., inzh.-ekonomist

Textbook on the accounting for paper stock resources and their utilization. Bum. prom. 38 no.11:30 N '63. (MIRA 17:1)

GAYEVSKAYA, L.I.; KUZICHKINA, N.V. (Rostov-na-Donu)

Modification of V.V. Donskov's method used in the impregnation of argyrophil fibers in celloidin-embedded and frozen sections. Arkh. pat. 27 no.3:87-88 '65. (MIRA 18:5)

1. Eksperimental'nyy otdel (zav. - prof. M.A. Ukolova) Rostovskogo-na-Donu nauchno-issledovatel'skogo instituta rentgenologii, radiologii i onkologii (dir. - kand. med. nauk A.K. Pankov) Ministerstva zdravookhraneniya RSFSR.

1. KUZICHKINA, P. M.

2. USSR (600)

4. Coal - Say - Shundara

7. Report on the geological surveying carried out at the Shargun'skiy coal deposits of Say-Shundara in 1944. (Abstract.) Izv. Glav. Upr. geol. fon. no. 2, 1947.

9. Monthly List of Russian Accessions, Library of Congress, March 1953. Unclassified.

KUZICHKINA, Ye.T., meditsinskaya sestra (Moskva)

Education and health work for children suffering from cerebral diseases. Med.sestra 16 no.6:23-25 Je '57. (MLRA 10:8)
(BRAIN--SURGERY) (PEDIATRIC NURSING)

KUZICHKINA, Yu.M.

Petrographic composition of coals from the southwestern spurs of the Gissar Range. Trudy Uz.geol.upr. no.1:105-115 '60. (MIRA 14:8)

(Gissar Range--Coal-analysis)

KUZICHKINA, Yu.M.

Spore-pollen complexes from the sediments of the Jurassic system in Central Asia and their significance for the study of stratigraphy. Trudy Uz. geol. upr. no.2:65-70 '62. (MIRA 16:8)
(Soviet Central Asia--Palynology)

KUZICHKINA, Yu.M.

Spore-pollen complexes from Jurassic coals in the Tien Shan.
Trudy Inst.geol.AN Tadzh.SSR 5:106-138 '62. (MIRA 16:1)
(Tien Shan--Palynology) (Tien Shan--Coal geology)

KUZICHKINA, Yu.M.; SIKEL', T.A.

New fern from the Upper Jurassic deposits of the YAgnov River. Uch. zap. SAIGIMSa no.7:11-16 '62. (MIRA 17:2)

1. Glavnoye upravleniye geologii i okhrany nedr pri Sovete Ministrov UzSSR i Tashkentskiy gosudarstvennyy universitet.

KUZIEL, Stanislawa

Epiphytic lichen associations on fruit trees in orchards of the Dunajec River Valley region. Acta agrobot 16:59-65 '64.

1. Department of Evolutionism of Lodz University.

KUZIEMSKI, Henryk

Venomous secretions of the skin in amphibians. Kosmos biol 11 no.6:595-602 '62.

KUZIEMSKI, J. ; PRZEDPELSKA, W.

"Meteorological Description of the Spring of 1954", P. 7. (GAZETA OBSERWATORA, Vol. 7, No. 6, June 1954, Warszawa, Poland)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1, Jan. 1955, Uncl.

KUZIEMSKI, S.

KUZIEMSKI, J.

A few remarks on hydrology of lakes in the Sommerfield region, Great Poland, and Kujawy, p. 2. (GAZETA OBSERWATORA, P.I.H.M., Warszawa, Vol. 8, no. 2, Feb. 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 6, Jun. 1955, Uncl.

KUZIEMSKI, J.

The Lake Wigry; a hydrographic and morphologic sketch. p. 8.
Vol. 9, no. 1, 1956 Warszawa

GAZETA OBSERWATOR

SOURCE: East European Acession List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

KUZIEMSKI, J.

KUZIEMSKI, J. Hydrologic conditions of Lake Wigry. P. 8.

Vol. 9, no. 5, May 1956
GAZETA OBSERWATORA, P.I.H.M.
SCIENCE
Warszawa, Poland

So: East European Accession, Vol. 6, no. 2, Feb. 1957

KUZIEMSKI, Jerzy

Atmospheric circulation as a factor of spatial differentiation of the climatic conditions in Poland. Przegl geofiz 7 no.1: 23-36 '62.

1. Panstwowy Instytut Hydrologiczno-Meteorologiczny, Warszawa.

KAVUN, Vasiliy Mikhaylovich. Prinimali uchastiye: BABSKIY, I.I.; BOROVSKIY, V.A.; VITKOVSKIY, M.P.; ZIMOVETS, V.N.; SEREDENKO, B.N.; PITUL'KO, V.Ye.; CHEPURNOV, I.A.; BLAZHEVSKIY, V.K.; YAROPUD, V.N.; RYBAK, V.N.; KUZIK, G.I.; ZADNEPRYANETS, G.V.; IVANOV, A.N., red.; BELOVA, N.N., tekhn. red.

[Efficient farm management] Ratsional'noe vedenie khoziaistva. Moskva, Sel'khozizdat, 1963. 205 p. (MIRA 16:4)

1.Ukrainskiy nauchno-issledovatel'skiy institut ekonomiki i organizatsii sel'skogo khozyaystva (for Babskiy, Borovskiy, Vitkovskiy, Zimovets, Seredenko, Pitul'ko, Chepurnov). 2. Vinnitskaya gosudarstvennaya sel'skokhozyaystvennaya opytnaya stantsiya (for Blazhevskiy, Yaropud). 3. Ukrainskiy nauchno-issledovatel'skiy institut zemledeliya (for Rybak). 4. Sekretar' partiynoy organizatsii kolkhoza imeni XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza (for Kuzik). 5. Glavnyy agronom kolkhoza imeni XXII s"yezda Kommunisticheskoy partii Sovetskogo Soyuza (for Zadnepryanets).
(Collective farms—Management)

KUZIKOV, V.

How we work. Stroitel' no.6:13-14 Je '59. (MIRA 12:9)

1. Instruktor peredovykh metodov truda Orgstroya Nauchno-issledovatel'skogo instituta organizatsii, mekhanizatsii i tekhnicheskoy pomoshchi stroitel'stvu.
(Reinforced concrete)

S/144/60/000/010/009/010
E194/E355

AUTHORS: Morozov, D.P., Doctor of Technical Sciences, Professor and Kuzikov, V.S., Aspirant

TITLE: Transient Processes in the Electrical Drive of a Straight-through Multiple-stand Draw-Bench

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika, 1960, No. 10, pp. 109 - 123

TEXT: Existing circuits for the electrical drive of draw-benches are unsatisfactory and it has become necessary to develop new ones. The circuit with the motors connected in series is of particular interest as it avoids the use of shunt rheostats or other special devices for synchronising the motors on successive stands. This simplifies the design of the bench, permitting use of the straight-through arrangement of drawing without twisting the wire or bending it round tension rollers of small diameter. The straight-through arrangement is particularly advantageous in the manufacture of high-carbon wire for use in pre-stressed concrete. In the circuit considered the drum of each drawing

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stand is individually driven by a DC motor. All the armatures are connected in series and the field windings are paralleled to the supply. With the motors connected inseries and in the presence of mechanical interconnection between the drums due to the wire the system is self-regulating over fairly wide limits. The wire serves as a mechanical link between the drums as it is simultaneously drawn through a number of discs. The presence of back-tension in the wire means that part of the energy is transmitted through the wire from one motor to another, in a direction opposite to that of the motion of the metal. Any disturbance in the process due to die wear or variations in the blanks alters the back-tension and so redistributes the current between the motors The mill control is very flexible and appropriate drawing conditions can be selected for each grade of wire. Experimental study has shown that the new system is reliable in operation and

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allows the wire-drawing process to be carried out at speeds up to 15 - 20 m/s, which is much higher than usual. It is of interest to investigate transient conditions of the electrical drive on a straight-through draw-bench. The first point to be considered is how the mechanical inertia of the drive to the drums and the elasticity of the wire affect the transient processes. The simplest case is consider i when there are two drums and two dies. The drums are driven by two motors connected in series. The process of acceleration of the draw-bench is examined, when the voltage applied to the motor armatures is suddenly raised by a certain amount. It is particularly important to determine possible changes in the back-tension during transient conditions, particularly to avoid breaking of the wire or coiling loops. In the examination electromagnetic inertia of the armature circuit is neglected. The initial conditions are then stated. The wire is wound round the drum. The motor fields are steady.

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Steady-state tensions are set up in the wire. Wire is being drawn at the lowest possible speed. The equations of the transient condition of accelerations are formulated as increments on or deviations from the initial equilibrium conditions. Equations are then written down for various currents, voltages, back-tensions and speeds. Under steady-state conditions, the wire leaves the first drum at the same speed as it enters the second die. Under transient conditions this is not necessarily so. Eqs. (1) and (2) are written for the elastic strain of the wire and the back-tension at entry to the second die. The equations cannot be solved strictly analytically and even if they could the solutions would be too complicated for practical purposes. Therefore, certain assumptions are made in writing the expression for the back-tension. The cross-section of the wire is taken as independent of elastic strain and since the distance from the die to the drum axis is small it is assumed in calculating the elastic

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strain of the wire that it reaches the drum immediately after leaving the die. Equations (1) and (2) may then be simplified to the form of (3) and (4). In practice, on a straight-through draw-bench the magnetic fluxes of the motor fields are different and the drum inertias are different. Hence, when a change is made in the voltage applied to the armature-circuit the drum motors tend to assume different accelerations. This is resisted by the presence of the mechanical connection between the drums due to the wire. The back-tension and static torque of the motors alter and the additional tension may be either positive or negative.
A number of equations are then formulated expressing, for example, the armature current, the voltages on the terminals of each motor, the overall voltage on the motor terminals and the motor torques. Combinations of these equations are solved to obtain expressions for the armature current and the conditions of electrical equilibrium of the two motors and

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Transient Processes in the Electrical Drive of a Straight-through Multiple-stand Draw-bench

of mechanical equilibrium of the system. Finally, the transient condition equations in incremental form are obtained as Eqs. (11) and (12). These equations are then solved by an operator method based on Laplace transforms.
Next, a numerical example is worked for a draw-bench with two drums, given the operating conditions and the properties of the wire. The acceleration that results from increasing the voltage applied to the armature circuits by 10 V is determined as Eqs. (23) and (24). The expression for the change in back-tension during the transient period is written in the form of expression (25). The equations derived in working out this numerical example were used to construct the curves of the transient process of speed and back-tension shown in Figs. 3 and 4. The period of oscillation of the magnitudes investigated is the same and equal to 0.155 sec. Changes in them during the transient state follow a damped oscillatory

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law. It is found that with even quite a sharp change of voltage the change in drum speed due to elastic strain of the wire is insignificant.
The article next discusses the influence of the elasticity of the wire on the nature of the transient conditions that arise when the draw-bench is accelerated. The conditions are first worked out for a perfectly rigid wire and then the change due to the elasticity is found. The rigid wire gives the smooth exponential curve shown dotted in Fig. 3, whilst when elasticity is allowed for the curve oscillates slightly about the previous dotted line. The elastic properties of the wire influence the values of tension during the dynamic conditions. Depending on the speed changes, energy may be stored in the wire or returned to the system and can cause oscillations. At the end of the transient process the changes in back-tension cease and the back-tension becomes steady.

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E194/E355

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The causes of the additional back-tension that appears during the period of acceleration and retardation of the draw-bench are the different inertia masses of the drives of the drums and the electromechanical time constants of the motors. In order to make clear the influence of the wire elasticity on the nature of the changes in back-tension, the law of the changes is determined, on the assumption that the wire is absolutely rigid. Eqs. (31) and (32) are derived and the tension is found to alter according to an exponential law. The sign and value of the additional back-tension during transient conditions depend on the difference between the inertia masses of the two drums and the field fluxes of the motors. A brief numerical example is worked out. The smooth exponential of Fig. 5 is obtained for the case of rigid wire and if the elastic properties of the metal are allowed for an

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E194/E355

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additional damped oscillation about this exponential is obtained. In general, it is not particularly important to allow for elasticity of the metal during slow changes of voltage such as occur under normal running-up and shutting down.
There are 5 figures and 5 Soviet references.

ASSOCIATIONS: Moskovskiy energeticheskiy institut (Moscow Power Engineering Institute)
Vsesoyuznyy zaochnyy politekhnicheskiy institut (All-Union Correspondence Polytechnical Institute)

SUBMITTED: July 4, 1960

Card 9/9

KUZIKOV, V. S.

Cand Tech Sci - (diss) "Electric drive and automatization of a stand of multiple wire-drawing. (Theory and experimental studies)." Moscow, 1961. 24 pp; with diagrams; (Ministry of Higher and Secondary Specialist Education RSFSR, Moscow Order of Lenin Power Inst); 150 copies; price not given; (KL, 10-61 sup, 215)

MOROZOV, Dmitriy Petrovich, doktor tekhn.nauk, prof.; KUZIKOV, Valentin Spiridonovich, aspirant

Transient processes in the electric drive of a continuous wire-drawing machine. Izv. vys. ucheb. zav.; elektromekh. 4 no.3:49-61 '61. (MIRA 14:7)

1. Moskovskiy energeticheskiy institut (for Morozov).
2. Vsesoyuznyy zaochnyy politekhnicheskiy institut (for Kuzikov).
(Wire drawing--Electric driving)

ZORE, V.A.; KUZIKOVA, N.S.; NIKULINA, L.N.

Some new lecture demonstrations. Usp. fiz. nauk 77 no.1:197-200 My '62. (MIRA 15:6)
(Physics--Study and teaching)

KUZIKYAN, G.

Eighty suggestions made by innovator Artashes Mkrtchian.
Prom.Arm. 4 no.9:41-42 S '61. (MIRA 14:11)
(Leninakan--Textile industry--Technological innovations)

KUZILEK, Frantisek

What is retarding technical development? Tech praca 16 no.2: 149-150 F'64.

1. Technicky namestek, Tovarny na obrabeci stroje, Celakovice.

IVCHENKO, Ye.G.; SEVAST'YANOVA, G.V.; GARIPOVA, L.Z.; KUZILOVA, E.T.

Oil of the Sergeyevka field. Trudy BashNII NP no.7:4-9 '64.
(MIRA 17:9)

KUZIMIN, Yu.N. (Leningrad); UFLYAND, Ya.S. (Leningrad)

Axisymmetric problem in elasticity theory for a half-space weakened by a plane circular slot. Prikl. mat. i mekh. 29 no.6:1132-1137 N-D '65. (MIRA 19:2)

1. Submitted April 12, 1965.

DELIMARSKIY, Yu. K.; GORODYSKIY, A. V.; KUZIMOVICH, V. V.

Chronopotentiometric determination of diffusion coefficients in melts. Coll Cz Chem 25 no.12:3056-3060 D '60.

(EEAI 10:9)

1. Institut obschey i neorganicheskoy khimii, Akademiya nauk Ukrainskoy SSR, Kiev.

(Chronopotetiometry) (Diffusion)

L 16740-66 EWT(m)
ACC NR: AR6000469 SOURCE CODE: UR/0299/65/000/017/R036/R037

AUTHORS: Kuzin, A.; Kryukova, L.; Kopylov, V.; Kolomiytseva, I.; Struchkov, V.

TITLE: Some mechanisms of the effect of ionizing radiation on cell division

SOURCE: Ref. zh. Biologiya, Abs. 9R218

REF SOURCE: Sb. Vopr. biofiz. i mekhanizma deystviya ionizir. radiatsii. Kiyev, Zdorov'ya, 1964, 163-168

TOPIC TAGS: radiation biologic effect, radiation plant effect, cell physiology, PLANT GROWTH, MITOSIS

ABSTRACT: Tests on the exposure of separate sections of Vicia faba, with the remaining part of the plant carefully screened, indicate the formation of a number of metabolites under the influence of such exposure. The metabolites, called radio-inductors (RI), migrate to the unexposed parts and inhibit cell division in them. The inhibiting of mitosis is observed even after wetting the growths in extracts from exposed plants. The quantity of radio-inductors formed during a determined range of doses increases with the dosage. The authors suggest that the products of oxidation of phenol derivatives, in particular those of the oxidizing disintegration of tyrosine, may be the inhibitors of cell division. Theoretically, the products of the fermentative oxidation of tyrosine include dehydrophenylalanine, various quinones, and high-polymer melanines, some of which possess properties of free radicals and powerful oxidizers. The formation of the carbohydrates mentioned provides experimental

UDC: 577.3

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L 16740-66

ACC NR: AR6000469

corroboration for the study of products from the exposed leaves by the method of chromatography and EPR. Model tests on inhibiting mitosis after the addition of tyrosine, tyrosinase, and melanines indicate that these carbohydrates are radio-inductors. The authors suggest that the intermediate products of the oxidation of tyrosine found in a free radical state can form complexes with DNA and exclude it from the cycle of changes necessary for the beginning of mitosis. A. Aleksakhin [Translation of abstract]

SUB CODE: 06

Card 2/2

L 43935-66 EWT(1)/EWT(m)/FSS-2 IJP/RD/GW

ACC NR: AP6028567 SOURCE CODE: UR/0209/66/000/008/0035/0041

AUTHOR: Kuzin, A. (Corresponding member AN SSSR)

40
39B

ORG: none

TITLE: Radiobiology and space investigations

SOURCE: Aviatsiya i kosmonavtika, no. 8, 1966, 35-41

TOPIC TAGS: ~~particular~~ radiation biologic effect, proton, ~~biologic effect~~, radiation plant effect, relative biologic efficiency, space radiobiology, ~~exobiology~~

ABSTRACT: This article reviews in general terms the main trends of Soviet radiobiological research. Their concerns are: the relative biological effects of corpuscular and ionizing radiations; radiation intensity as a function of terrestrial altitude; radiation intensity on the lunar surface (Luna 10); the biological effects of actual and simulated solar flares; the maximum permissible dose of radiation for humans; the effect of corpuscular radiation on cellular and metabolic processes; the radioprotection of humans and animals by means of pharmacological agents and local shielding of unusually radiosensitive organs; the long-term aftereffects of space radiation; the influence of chronic, low-intensity radiation on functions of the central nervous

Card 1/2

KUZIN, Aleksey Alekseyevich; BELOZEROV, N.G., red.; KOTLYARENKO, V.A., tekhn.red.

[Ore region] Rudnyi krai. Belgorodskoe knizhnoe izd-vo, 1958. 81 p. (MIRA 12:6)
(Kursk Magnetic Anomaly)

KUZIN, A. A.

Ore mining on Russian territory (up to the 16th century). Trudy Inst.ist.est.i tekh. 33 '60. (MIRA 13:8)
(Mines and mineral resources)

KUZIN, Aleksandr Avramiyevich; SHUKHARDIN, S.V., otv. red.; KRIVENKO, Ye.S., red. izd-va; SHEVCHENKO, G.N., tekhn. red.

[History of the discovery of ore deposits in Russia up to the middle of the 19th century] Istoriia otkrytii rudnykh mestorozhdenii v Rossii do serediny XIX v. Moskva, Izd-vo Akad. nauk SSSR, 1961. 359 p. (MIRA 15:1)
(Ore deposits)

KUZIN, A.A.

Journal of the Iron and Steel Institute
Vol. 176 Part 3
Mar. 1954
Foundry Practice

Making Steel Castings from Steel Produced in a Small Converter. M. A. Solntsev, L. M. Chemodanov, and A. A. Kuzin. (*Liteinoe Proizvodstvo*, 1953, (5), 8–11). [In Russian]. Details are given of the production of steel castings for service at temperatures up to 425° C. The steel is made in 2½-ton Bessemer converters with a charge consisting of 50% cast iron, 12% steel scrap 5 to 50 mm. thick, 29·8% of clean foundry steel scrap and 8·2% of ferrosilicon. For cast irons high in sulphur, fluorspar is added to the flux and soda ash to the ladle. Composition and properties of mould and core materials are tabulated, and their treatment is described.

KUZIN, A.A., inzhener (g. Yaroslavl').

Bronze reinforcement of steel bearings for tenders. Zhel. dor. transp. 38 no.8:77-78 Ag '56. (MLRA 9:10)

(Bearings (Machinery))

SHATSKIY, Petr Sidorovich; KUZIN, A.A., red.; KOTLYARENKO, V.A., tekhn.red.

[At the locomotive controls] U rovera lokomotiva. Belgorodskoe knizhnoe izd-vo, 1958. 19 p. (MIRA 12:2)
(Akimenko, Tikhon Nikitovich, 1912-)